ABSTRACT OF THE DISCLOSURE

A brake disc for a vehicle which, when the brake disc is located on a hub end of a vehicle axle, places the friction portion of the brake disc closer to the center of the axle than a rim of a vehicle wheel mounted on the axle hub, such that the friction portion of the brake disc is outside of the wheel envelope. The friction surface of the brake disc located in this manner may have a greater radius than the inner wheel radius, thereby permitting increased braking torque to be generated, and is exposed to the cooling environment outside the wheel rim envelope. Heat transfer from the friction portion to the hub end of the vehicle axle may be inhibited by ring-shaped reduced-thickness sections, which may also serve as flexible hinges that permit the brake disc to flex to accommodate asymmetric loading by a brake caliper.